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10/531,053

04/12/2005

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EXAMINER

SCRUGGS, ROBERT J

ART UNIT

PAPER NUMBER

3723

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/531,053

Applicant(s)

CHIOCCHETTI ET AL.

Examiner

Robert Scruggs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 35-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 35-48 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/12/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 35-48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 10, 2007.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on April 12, 2005 is noted. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Objections***

3. Claim 12, is objected to because of the following informalities: in line 9 of claim 12 the applicant discloses, "each first said side." The examiner believes that it should read as, "each said first side." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 7, 8, 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In these claims the first grinding wheel is set to have a grain size of 7-46 and the second grinding wheel has a grain size of 45-91. However, in claim 1 the applicant discloses that the grinding wheels have different grain sizes. Obviously, grains of 45 and 46 could be selected for both grinding wheels

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therefore producing grinding wheels that are formed with the same grain. More detail should be provided to specifically disclose the grinding wheel structure or the ranges should be corrected to not overlap.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-14, 16-20 and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biagiotti (WO 00/21722) in view of Spencer (RE 30598) or Gambini (2002/0031991) and further in view of Kovach (5484327) or Kaye (5941763).

In reference to claims 1 and 9, Biagiotti discloses a sharpening unit comprising, a disc-shaped cutting blade (Figure 4) (3) formed with a bevel portion (3c), a first grinding wheel (20) and suggests that multiple grinding wheels could be used (Page 6, Lines 26-29), the bevel portion (3c) is formed such that a grinding wheel is brought into contact with a first side (F1) of the cutting blade at an inclination greater than when the grinding wheel is brought into contact with a second side (F2) of the cutting blade, Biagiotti does not specifically disclose that a first grinding wheel is used to sharpen the first side of the bevel portion on the cutting blade, a second grinding wheel used to sharpen the second side of the bevel portion on the cutting blade and that the first grinding wheel can be formed with a finer grit than the second grinding wheel. Although, as previously

mentioned above Biagiotti does suggest that multiple grinding wheels could be used. However, Spencer discloses a sharpening unit (Figure 19) comprising, a first grinding wheel (135) for sharpening a first side of a bevel portion on a cutting blade and a second grinding wheel for sharpening a second side of the bevel portion on a cutting blade. In addition, Gambini also discloses a sharpening unit (11) comprising, first and second grinding wheels (33) (Paragraph 33) used to sharpen first and second sides of a bevel portion on a cutting blade. Furthermore, Kovach teaches that first and second grinding wheels (Figure 1) (18 and 22) can be formed with different types of grits (Column 6, Lines 55-58). Lastly, Kaye also teaches that numerous grinding wheels can all be formed with different types of grits (Column 3, Lines 29-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sharpening unit, of Biagiotti, with first and second grinding wheels which sharpen first and second sides of a bevel portion on a cutting blade and where the grinding wheels are formed with different grit sizes, in view of Spencer or Gambini and further in view of Kovach or Kaye, in order to provide a more efficient sharpening device that quickly recovers the wear of the cutting disc during operation.

In reference to claims 2 and 11, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose a sharpening unit which allow the first and second grinding wheels to move toward and away from the blade according to a direction essentially parallel to a respective axis of rotation of the first grinding wheel

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and the second grinding wheel (see page 9, Lines 21-25 of Biagiotti or see Column 9, Line 46-Column 13, Line 14 of Spencer).

In reference to claims 3 and 4, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also obviously disclose that the grinding wheels individually can come into contact with the cutting blade before the other grinding wheel comes into contact with the cutting blade depending on the how the user is controlling the movement of the wheels in relation to one another.

In reference to claim 5, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the grinding wheels can be motorized (see page 9, Line 13 of Biagiotti).

In reference to claims 6 and 12, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the grinding wheels are equal and opposite in respect to a lying plane of the cutting edge of the blade, wherein said plane being essentially orthogonal to the axis of rotation of the blade (see page 4, line 32 of Biagiotti, see figure 19 of Spencer) and wherein the first side (F1) and the second side (F2) of the bevel portion of the cutting blade are different in respect to the lying plane (see figure 5 of Biagiotti).

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In reference to claims 7 and 8, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the first grinding wheel could have a fine grain from about 7-46 and that the second grinding wheel could have a grain of about 45-91, since Kovach teaches that the abrasive wheels be formed with any type of abrasive grain (see Kovach, Column 6, Lines 55-58).

In reference to claim 10, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that first side (F1) of the bevel portion is subjected to hardening treatment (see page 8, line 30 of Biagiotti).

In reference to claim 13, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the first side is shown to be as substantially parallel to a lying plane as shown the applicant's drawings (see figure 5 of Biagiotti).

In reference to claims 14 and 22, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the difference in inclination between said first and second sides could be at least 1 degree (see page 4, Line 27-page 5, line 2 of Biagiotti).

In reference to claim 16, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also obviously disclose that the surface hardness is grater than

70 HRC, since the side that is subjected to the hardening treatment is performed with the same material as disclosed by the applicant.

In reference to claim 17, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the blade is made from alloy steel (see page 6, lines 9-12 of Biagiotti).

In reference to claims 18-20, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose that the surface treatment is a controlled nitriding treatment (see page 6, lines 12-16 of Biagiotti), which is harder than a base material of the blade (Figure 5).

In reference to claim 23, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye also disclose the blade has a body delimited by two planes parallel to each other and essentially orthogonal to the axis of rotation of the blade (see figure 5 of Biagiotti).

In reference to the method claims 24-34, Biagiotti taken in view of Spencer or Gambini and further in view of Kovach or Kaye disclose the structural elements of the apparatus therefore the method is obviously disclosed, since the method merely recites the structural elements of the apparatus.



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8. Claim 15, is rejected under 35 U.S.C. 103(a) as being unpatentable over Biagiotti (WO 00/21722) in view of Spencer (RE 30598) or Gambini (2002/0031991) and further in view of Kovach (5484327) or Kaye (5941763) and particularly in view of Maatschappii (665983). Biagiotti discloses that the first side can be formed from a hardening treatment but does not specifically disclose that the thickness of the layer is greater than 30 micrometers. However, Maatschappii discloses a hardening step that forms a layer (15) on the surface of the cutting blade greater than 30 micrometers (Page 2, Line 67-70). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the hardened layer, of Biagiotti, with a layer that is greater than 30 micrometers, in view of Maatschappii, in order to provide a strong yet relatively cheap to produce blade.

9. Claim 21, is rejected under 35 U.S.C. 103(a) as being unpatentable over Biagiotti (WO 00/21722) in view of Spencer (RE 30598) or Gambini (2002/0031991) and further in view of Kovach (5484327) or Kaye (5941763) and particularly in view of Dewez (3507633). Biagiotti discloses that the blade is made from various metals, but does not specifically disclose that the blade is formed from chrome steel containing molybdenum. However, Dewez discloses a blade that is formed from chrome steel containing molybdenum (Page 3, Lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the blade, of Biagiotti, with a blade formed from chrome steel containing molybdenum, in view of Dewez, in order to provide

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a blade that has improved resistance to brittle fracture therefore also extending the service life of the blade.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Berkel (1968662) discloses a sharpening system that includes first and second grinding wheels that sharpen a bevel portion onto a blade. Smith (6450864) discloses a grinding machine that uses first and second grinding wheels that are able to move in various directions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Scruggs whose telephone number is 571-272-8682. The examiner can normally be reached on Monday-Friday, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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